

46648 to 46659.

From Ecuador. Collected by Dr. J. N. Rose, associate curator, United States National Herbarium. Received October 18, 1918. Quoted notes by Dr. Rose.

46648. *PASSIFLORA LIGULARIS* JUSS. Passifloraceæ. **Granadilla.**

"No. 1. *Granadilla*. Common in the market of Guayaquil. Fruit orange-colored with a long stem. There are many species here; this is one of the best."

46649. *HORDEUM VULGARE PALLIDUM* Seringe. Poaceæ. **Barley.**

"No. 5. *Cebada*. Sold in the markets of Guayaquil. Also sold in cracked form. Said to have been brought from the highlands of Ecuador."

46650 to 46652. *PHASEOLUS VULGARIS* L. Fabaceæ. **Common bean.**

46650. "No. 6. *Chola* or *Frijoles colorados*. Brownish colored. From Guayaquil."

46651. "No. 7. *Caballero*. White. From Guayaquil."

46652. "No. 8. *Bayo*. Light gray. From Guayaquil."

46653. *ZEA MAYS* L. Poaceæ. **Corn.**

"No. 10. Three ears of corn from Guayaquil."

46654. *AMARANTHUS* sp. Amaranthaceæ. **Amaranth.**

"No. 11. Flowers, leaves, and stem dark purple. From Huigra."

46655 to 46657. *SOLANUM TUBEROSUM* L. Solanaceæ. **Potato.**

46655. "No. 12. Yellow potato."

46656. "No. 13. White skin; called *blanca*. From Guayaquil."

46657. "No. 14. Brown skin; called *leona* or *leona blanca*. From Guayaquil."

46658. *CHENOPodium QUINOA* Willd. Chenopodiaceæ. **Quinoa.**

"No. 26. A large pigweed extensively cultivated in the high plateaus of South America. The seeds are eaten, prepared in various ways. Quinoa presents many color variations in the plants, as well as in the seeds, especially in the direction of reds and purples. The colored seeds are used almost exclusively for making *chicha*, or native beer. The white seeds are preferred for eating. A possibility of utilizing the quinoa in the United States lies in its use as a breakfast food. Some pronounce it as good as oatmeal, and one resident Scotchman even insisted that it was better! From a crop standpoint, too, the plant appears rather promising, being very vigorous and productive. It is of erect habit, has a strong central stalk, and forms compact heads, heavy with seeds. There is no reason why it should not be gathered and thrashed by machinery." (O. F. Cook.)

For previous introduction, see S. P. I. No. 41340.

46659. *OXALIS TUBEROSA* Molina. Oxalidaceæ. **Oca.**

"No. 19. *Oca*. A plant related to our common sheep sorrel, widely cultivated in Peru and Bolivia for the sake of its fleshy rootstocks, which are an important article of food. Ocas are eaten raw, as well as cooked, and are also frozen and dried. Raw ocas, when first dug, have a distinctly acid taste, like sheep sorrel, but this is lost after the tubers have been exposed to the sun. The plant attains a height of 1 foot or more and has the general appearance of a large sheep sorrel. The flowers are yellow and the leaflets are folded at night or in wet weather, the same